

# Tennessee Department of Environment and Conservation Division of Water Resources

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William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

FEB 0 1 2017

Phase II Stormwater Permit Notice of Intent (NOI)
Phase II Municipal Separate Storm Sewer Systems (MS4)

ENVIRONMENT & CONSERVATION COOKEVILLE FIELD OFFICE

#### **PURPOSE**

The purpose of this Notice of Intent (NOI) is for a Tennessee city, county, utility district, university or military base to submit the information necessary to obtain coverage under an NPDES permit to discharge stormwater runoff from a Phase II municipal separate storm sewer system.

#### INSTRUCTIONS

You must provide the following information to the Division of Water Resources as application material. You may either submit a hard copy of the signed NOI as described in sub-part 2.2.1 of the MS4 Permit, signed in accordance with the signatory requirements of sub-part 6.7 of the permit, and a copy of the NOI, to the address shown in sub-part 1.2 of the permit for the EFO responsible for the county where the facility is located; or you may submit by e-mail, the completed NOI and attachments (such as map and city ordinances) to water.permits@tn.gov.

After completing the questions in each section, list the Best Management Practices (BMPs) that you will implement in each program. Attached at the end of this NOI is an addendum to list BMP Measurable Goals and Implementation Milestones. You must complete the addendum, providing more details on the goals and milestones for each BMP outlined in this NOI.

After completing the BMP's in each section provide the administrative information to complete those BMP's as explained here:

Primary Contact and Position/Title	The person in your organization serving as the primary contact.	
Other Department and Roles	Other departments within your organization involved in the project and how their role is identified.	
Other Government Entity and Roles	Identification of other government entities responsible for implementing one or more of the BMP's. Include a copy of the contract or proposed agreement with execution schedule.	
Other Institutions and Roles	Identification of partnerships with another MS4 operator or institution (e.g., Chamber of Commerce, environmental interest organizations, civic groups) to achieve the BMP's.	
Target Groups (if applicable)	Specific kinds of groups that will be targeted, such as service industries (i.e., carpet cleaning), civic groups, schools, and church groups, etc.	

PART I - ADMINISTRAT	TIVE INFORMATION		A principle of	
Name of Phase II MS4	city, county, stormwa	ter utility district or public institution	: City of Crossville	<u>.</u>
Include a latitude and lo	ngitude of a represer	ntative location within your boundar	ies for mapping p	urposes.
Latitude (dd.dddd):	35.95341	Longitude (dd.dddd):	-85.028923	
James Mayberry		City of Crossville	Mayor	
Responsible Elected Of	ficial or Officer	Title		
392 N. Main St.		Crossville	TN	38555
Street Address		City	State	Zip Code

PROGRAM CONTACT	TECHNICAL CONTACT
Heath Blaylock	Heath Blaylock
Name	Name
heath.blaylock@crossvilletn.gov	heath.blaylock@crossvilletn.gov
Email Address	Email Address
931-456-6947	931-456-6947
Phone Number	Phone Number
Attach an organizational chart that shows the different de	partments involved in stormwater management.
PART II - DESCRIPTION OF STORM SEWER SYSTEM	
ITEM A - AREA SERVED (IN SQUARE MILES)	
For a city, town, university, or utility district university or military Provide jurisdiction area within current boundaries Provide additional area of urban growth boundary  For a county: Provide total area: Provide area that is unincorporated Provide unincorporated, urbanized area (UA) Indicate by checking the appropriate box if the permit will boundary  No Yes, the entire county (unincorporated) Yes, the non-UA portions, as follows:  ITEM B - STORM DRAINAGE INFRASTRUCTURE	22 67 N/A N/A N/A
TIEM B-STORM DRAINAGE INFRASTRUCTURE	
Give figures for the following features of stormwater drainage government. For a county government, indicate whether the area. Figures for length and number of culverts and catch be	figures represent the entire county or only the urbanized
For counties: Entire county Urbanized area	a only 🖂
Storm Sewers <u>20</u> (miles or feet) Culverts <u>4000</u> Water Quality Treatment Ponds <u>0</u>	Open Ditches 261 (miles or feet) Catch Basins 170

ITEM C - MAPS			
is legible. If you are not able to provide all the inform to why the information has not been submitted:	mation. <i>i</i>	A single map may be submitted, as long as the informark the applicable check box and attach an explana	mation tion as
Areas zoned for commercial or industrial activity Municipally owned/operated industrial activities Municipal or County Wastewater Treatment Plants Municipal Vehicle Fleet Maintenance Centers Municipal Power Plants Municipal Airports Municipal Landfills		Military Installations State vocational, technical, college or universities Federal vocational, technical, college or universities City Roads County Roads Streams Topography or General Drainage Patterns	

## ITEM D - IDENTIFYING STREAMS WITH UNAVAILABLE PARAMETERS or EXCEPTIONAL TENNESSEE WATERS

Using the GIS mapping tool (<a href="http://www.tn.gov/environment/article/wr-water-resources-data-viewer">http://www.tn.gov/environment/article/wr-wq-water-quality-reports-publications</a>) published on the division's web site, determine whether stormwater from any part of the MS4 discharges into streams with unavailable parameters (previously referred to as impaired streams) for nutrients, pathogens, siltation, or other parameters related to stormwater runoff from urbanized areas or to streams designated as Exceptional Tennessee Waters and list below. For any waterbody with unavailable parameters or Exceptional Tennessee Waters, indicate the waterbody ID#, name of the waterbody and nature of pollution (cause) or Exceptional status.

WATERDORY IN AND MANE OF WATERDORY	
WATERBODY ID# AND NAME OF WATERBODY	NATURE OF POLLUTANT (CAUSE) OR EXCEPTIONAL
TN06010208007-2000 OBED RIVER	Total Phosphorus M, Nitrate+Nitrate M
TN06010208013-0200 LITTLE OBED RIVER	Total Phosphorus M, Nitrate+Nitrate M, Loss of biological
	integrity due to siltation NA, Escherichia coli M
TN06010208013-0400 DROWNING CREEK	Loss of biological intergrity due to siltation NA
TN06010208013-1000 OBED RIVER	Nitrate+Nitrate M, Total Phosphorus M
TN06010208013-2000 OBED RIVER	Flow Alteration NA, Physical Substrate Habitat Alterations
TN06010208015-0900 BYRD CREEK	Low Dissolved Oxygen L
TN06010208015-0930 ONE MILE CREEK	Loss of biological integrity due to siltation NA, Escherichia coli M
TN06010208013-2000 LITTLE OBED RIVER	.3 Mile upstream Genesis Rd. Exceptional
TN06010208015-0920 THREE MILE CREEK	Cumberland Mtn State Park. Exceptional
TN06010208015-0900 BYRD CREEK	Cumberland Mtn State Park. Exceptional
TN06010208013-1000 OBED RIVER	From confluence with Emory River to I-40. Exceptional
1	

If you have additional streams to list, include in a separate attachment.

TEM E - STATE OR EPA ISSUED TDMLs	
check the appropriate box. A list of EPA-Ap can be found on the division's web site:	

If you have additional streams to list, include in a separate attachment.

#### PART III - EXISTING LEGAL AUTHORITY TO CONTROL STORMWATER DISCHARGES TO MS4

You must review existing adopted and signed ordinances or regulations that are associated with stormwater discharges to your MS4. Attach a copy of ordinances and/or policies that give your MS4 the authority to control stormwater discharges into the MS4 storm sewer system. Ordinances and/or policies that deal with stormwater issues might be found, for example, in conjunction with litter control, prohibition of dumping, clean up of spills, grading/building permits, sewer connection ordinances, erosion prevention and sediment control practices, subdivision regulations or other land use/development ordinances.

## PART IV - SIGNATURE OF RESPONSIBLE CORPORATE OFFICER

This Notice of Intent (NOI) must be signed as follows: For a municipality, state, federal, other public agency, and/or co-permittees by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes one of the following:

- I. The chief executive officer of the agency.
- II. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

Jan Maching		
Signature	Title/Municipality	Date
Signature	Title/Municipality	 Date

## PART V - YOUR PROPOSED STORMWATER QUALITY MANAGEMENT PROGRAM

This NOI requires you to provide a brief description of your current and proposed activities as well as your BMPs for a stormwater management program. The following sections correspond to the six minimum control measures for a Phase II stormwater management program. If another MS4 will be responsible for implementing any or all portions of any or all following six minimum measures, then attach either the interlocutory agreement or the proposed agreement and schedule for adoption. You must still complete this NOI by answering the relevant questions for the six following measures.

For purposes of this NOI, the Public Education and Outreach and Public Participation and Involvement minimum measures have been combined.

## SECTION 1 - PUBLIC EDUCATION AND OUTREACH AND PUBLIC INVOLVEMENT/PARTICIPATION

#### A. Current Activities:

The following is a set of questions on your current Public Education and Outreach and Public Involvement/Participation. These questions are intended to highlight minimum program requirements under the MS4 permit. Each question with a "No" answer must be addressed with a solution in the MS4's proposed program.

1. Does the municipality currently distribute educational materials on the topics of stormwater quality, instream water quality, pollution impacts, pollution prevention, etc.? If yes, briefly describe the materials, including media used (e.g., written brochures, public service announcements, etc.); the topic(s) covered, intended target audience(s), and the distribution method: We distribute brochures to the public, contractors and elementary students on what stormwater is and on pollution prevention and seditment control.

Yes 
No

res 🖂	
stormwater qualit outreach activitie	cipality currently conduct or participate in public outreach activities focusing on the topics of cy, stream water quality, pollution impacts, pollution prevention, etc.? If yes, briefly describe the s, topic(s) covered, intended target audience(s), and the frequency of activities: We do a yearly for the county which is open to the public and all schools send every 5th grade class to participate.
We work with Sci	nools to donate weather stations and "Only Rain Down the Drain" storm inlet stickers.
Yes ⊠	No 🗌
3. Does the curre	nt municipal stormwater management program comply with Local. State and Federal public notice

3. Does the current municipal stormwater management program comply with Local, State and Federal public notice requirements? If yes, describe how the public is notified: Website, Radio and in Local water bills.

Yes ⊠ No □

#### B. Proposed Activities:

1. List the BMPs that you will implement in the areas of Public Education and Outreach and Public Participation and Involvement. These should be based on a set of priorities that you have identified in the areas of Public Education and Outreach and Public Participation and Involvement. Provide a short descriptive name to the BMP in the left column. In the right column, more fully describe the BMP.

For Public Participation and Involvement BMPs, you may not desire to dictate the ways in which the public participates or is involved in the stormwater quality management program; in this case, your proposed program should provide a forum and/or a structure which guides and encourages the public in participation. On the other hand, there may be specific ways you do want the public to be involved, based on your program needs. For instance, you may want stream watch groups to be organized. In both cases, your proposed program should describe how you will accomplish this, along with a time schedule.

PROP	PROPOSED BEST MANAGEMENT PRACTICES FOR PUBLIC EDUCATION AND PUBLIC PARTICIPATION	
BMP	BMP Name DESCRIPTION	
1A.	1A. Website Keep the Stormwater website updated providing regulations and policies for the Public.	

1B.	Educational	Update Brochures and distribute them to contractors, schools and businesses.
	Brochures	
1C.	Training	Provide training to employees and the general public to enhance knowledge on
		Stormwater
1D.	Media	Use media to inform the public about stormwater.

If you have additional BMPs to list, include in a separate attachment.

- 2. What specific groups will be targeted (e.g., service industries such as carpet cleaning, lawn care, civic groups, schools, church groups) if applicable: Schools and Contractors
- C. Measurable Goals and Implementation Milestones:

Attached at the end of this NOI is an addendum to list BMP Measurable Goals and Implementation Milestones. You must complete the addendum, providing more details on the goals and milestones for each BMP outlined in this NOI.

#### D. Administrative Information:

ADMINISTRATIVE INFORMATION FOR PUBLIC EDUCATION AND PUBLIC PARTICIPATION		
PRIMARY CONTACT POSITION OR TITLE		
Heath Blaylock Stormwater Coordinator		

Identify other Department(s) that will be involved and their role.

OTHER DEPARTMENT(S)	ROLE
N/A	

Identify if you will partner with another MS4 Operator, or with another institution (e.g. Chamber of Commerce, Environmental interest organizations, civic groups) in order to carry out the chosen BMPs.

ENTITY	ВМР
N/A	

Will another governmental entity be responsible for implementing one or more chosen BMPs? If so, identify the entity and which BMP(s) it will implement. Include a copy of the interlocutory agreement, or contract, or proposed agreement with execution schedule.

ENTITY	BMP
N/A	

#### SECTION 2 - ILLICIT DISCHARGE DETECTION AND ELIMINATION

## A. Current Activities

The following is a set of questions on your current Illicit Discharge Detection and Elimination Program. These questions are intended to highlight minimum program requirements under the MS4 permit. For MS4s who have not been previously covered under an MS4 permit, each element not currently performed must be implemented by the dates identified in Sub-part 4.1.1 of the permit. Thus, each question with a "No" answer must be addressed with a solution in the MS4's proposed program.

1. Does the municipality currently have a storm sewer system map that shows the location of system outfalls where the municipal storm sewer system discharges into receiving waters or conveyances owned or operated by another MS4? The map must also show: the names and location of waters that receive discharges from those outfalls; inputs into the storm sewer collection system, such as the inlets, catch basins, drop structures or other defined contributing points to the sewershed of that outfall; and general direction of stormwater flow.					
Yes ⊠ No □					
2. Does the municipality currently have an ordinance or regulatory mechanism that prohibits unauthorized non-stormwater discharges into the storm sewer system? If yes, attach a copy and give page and section number(s). If No, proceed to the next section (inspections and enforcement).					
Yes ⊠ No □ Page Number <u>9</u> Paragraph Number <u>8</u>					
3. Does the ordinance or regulatory mechanism clearly define non-stormwater discharges, either through a written description of a non-stormwater discharge or through a listing of authorized or unauthorized non-stormwater discharges?					
Yes ⊠ No □					
4. Does the ordinance or regulatory mechanism allow right-of-entry on private property for inspection of suspected discharges?					
Yes ⊠ No □					
5. Does the ordinance or regulatory mechanism prohibit dumping?					
Yes ⊠ No □					
6. Does the ordinance or regulatory mechanism give the MS4 owner/operator the authority to eliminate unauthorized non-stormwater discharges in the event of violations? If yes, note page number and paragraph number.					
Yes ⊠ No ☐ Page Number 14 Paragraph Number 3					
7. Does the ordinance or regulatory mechanism define penalties for violations? If yes, note maximum penalty, page number and paragraph number.					
Yes ⊠ No ☐ Maximum Penalty \$5000 Page Number 14 Paragraph Number 3					
8. Does the municipality presently have personnel and procedures in place to detect, identify and eliminate non-stormwater discharges? If yes, describe and indicate percentage of system inspected: The Stormwater department routinely spends the day traveling right-of-ways in search of illicit discharges while doing construction inspections. The Street Department personnel inspect culverts and catch basins weekly. They report any questionable findings.					
Yes ⊠ No □					
9. Does the municipality presently have procedures and personnel in place for enforcement of violations of the illicit discharge ordinance? If yes, describe: The City of Crossville has twelve level 1 Erosion and Sediment Control certified employees. Those employees are well aware on what to look for concerning illicit discharges. Our ordinance has different enforcement options from a written letter to a fine up to \$5000 per day.					
Yes ☑ No □					
10. Describe how enforcement actions are documented: <u>All enforcement action is kept in a folder on the city server. It starts with a site visit to visually access the situation and take photos. A written certified NOV is sent out and once received we keep a corrective action plan and all documents in the NOV folder.</u>					
11. Has the municipality defined "hot spots" for non-stormwater discharge screening and inspection purposes? If yes, describe and provide a map of illicit discharge screening hot spots: We have not determined any "hot spot" areas at the time, but will continue to work on searching for those areas if they arise.					

res 🗀 No 🗵						
about non-stormwater discharges t	have procedures in place to receive and consider information and complaints hat are submitted by the public? If yes, provide brief description: responsible wed: The City of Crossville has a stormwater hotline phone number and email for					
Yes ⊠ No □						
B. Proposed Activities:						
based on a set of priorities that you short descriptive name to the BMP PROPOSED BEST MANAGEMEN BMP Name  2A. Outfall Mapping  2B. Dry Weather Screening  2C. Training  2D. Inventory of Storm Sewer System  If you have additional BMPs to list,  2. What specific groups will be target.  C. Measurable Goals and Implement	eted, if applicable? Businesses and Industries					
	iding more details on the goals and milestones for each BMP outlined in this NOI.					
ADMINISTRATIVE INFORMATIO	N FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION					
PRIMARY CONTACT	POSITION OR TITLE					
Heath Blaylock	Stormwater Coordinator					
Identify other Department(s) that wi	Il be involved and their role.					
OTHER DEPARTMENT(S)	ROLE					
Street Department	Storm drains and roadway maintenance and inspections for illicit discharges					
Veolia Water Wastewater Treatment Plant Operators. They respond to sanitary sewer looks and notify us.						
	ner MS4 Operator, or with another institution (e.g. Chamber of Commerce, s, civic groups) in order to carry out the chosen BMPs.  BMP					
N/A						
	responsible for implementing one or more chosen BMPs? If so, identify the entity Include a copy of the interlocutory agreement, or contract, or proposed agreement					

BMP

ENTITY

N/A

SECTION	N 3 - CONSTRU	CTION SITE STORMW/	ATER RUNOFF F	ROGRAM		
A. Current	Activities					
intended to covered ur	o highlight minin nder an MS4 pe .1.1 of the perm	nestions on your current of the program requirement mit, each element not cuit. Thus, each question w	its under the MS4 arrently performe	4 permit. For MS d must be impler	4s who have not be net to the date	peen previously es identified in
and Federa	eurrent ordinance al public notice r ssville Stormwa	es/regulations for the mu equirements? If yes, de ter website.	nicipal stormwate scribe how the po	ər management public is notified: <u>F</u>	orogram comply w Tyers in water bills	vith Local, State s,Radio, and the
Yes ⊠	No 🗌					
If yes, inclu	currently have a ide a copy and r n site plans revi	n erosion prevention and reference the paragraph ew.	sediment contro number(s). If No	I - or similar - ord , proceed to the	dinance or regulation	ory mechanism? ons below about
Yes 🛛	No 🗌	Page Number 6	<u>S</u> Parag	raph Number <u>1</u>	<u>a</u>	
3. Does the control, and	e ordinance or red d other construc	egulatory mechanism rec tion waste controls for la	uire that site ope nd disturbance a	rators implemen ctivities?	t erosion preventi	on, sediment
Yes ⊠	No 🗌					
than or equ	al to one acre, o	latory mechanism requir or less than one acre if p If yes, note the page nur	art of a large com	nmon plan of dev	elopment or sale	ances greater that would
Yes ⊠	No 🗌	Page Number <u>5</u>	Parag	raph Number <u>1</u>		
5. Does the control? If y	ordinance or re yes, note the pa	gulatory mechanism cor ge number and paragrap	itain or reference oh number where	technical standa this is defined.	ards for erosion ar	nd sediment
Yes ⊠	No 🗌	Page Number <u>6</u>	Parag	raph Number <u>1a</u>	<u>a</u>	
(TNR10000	technical stand 0) requirements Tennessee Wa	ards meet or exceed the for design storm and sp ters?	current effective ecial conditions f	Tennessee Con or waterbodies v	struction General vith unavailable pะ	Permit arameters or
Yes ⊠	No 🗌					
7. Do those during const	technical stand truction?	ards require that constru	ction activities m	aintain temporary	y water quality ripa	arian buffers
Yes ⊠	No 🗌					
8. Does the department, runoff?	municipality pre zoning board) t	sently have in place a te hat evaluates new devel	chnical review propertion	ocess (i.e. engin	leering departmer truction for constri	nt, planning uction site
Yes 🛚	No 🗌					
9. Does the	technical review	process require an eros	sion prevention a	nd sediment con	trol plan with appr	opriate BMPs?

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Yes ⊠ N	
	process include a requirement for pre-construction meeting between the municipality and site cy construction sites?
Yes ⊠ N	o 🗆
responsible personn activities go through computer program, I the Stormwater Coo	ew process, provide a brief narrative or a flow chart of the process, describing the process steps, nel, and criteria used for evaluation of information or plans that are submitted: Construction a multiple step approval process. Codes Enforcement inputs the construction activity into a BLUE PRINCE, for each department to sign approvals. The contractor will then bring a site plan to redinator who approves the erosion and sediment controls as well as the permanent stormwater set Department will sign off on road way drainage. Stormwater personnel will inspect the site to properly installed.
12. Does the municipolar complaints submitted	pality presently have procedures in place for receipt and consideration of information and d by the public?
Yes ⊠ N	o 🗌
departments, person phone number. The	If narrative of the receipt process and procedures, describing process steps, responsible and (by title). Complaints are entered into a excel file describing the complaint with address and stormwater department does a site visit to review the complaint and determines which actions from there. Wether it be a NOV or a simple fix that doesn't require enforcement.
13. Does the municip	pality presently have personnel and procedures in place for construction site runoff inspection?
Yes ⊠ No	∘ □
14. Does the program	m provide for pre-construction meeting and monthly inspection of priority construction activities?
Yes ⊠ No	∘ □
	pality presently have procedures and personnel in place for enforcement to the maximum extend struction site requirements?
Yes ⊠ No	o 🗆
16. Does the municiprequirements?	pality use a Stop Work or similar order to enforce compliance with construction site policies and
Yes ⊠ No	o 🗆
	ment actions documented? Enforcement actions are documented with a NOV letter sent to the with the USPS tracking and required signature forms. The sites are inspected and photographs
Fundamentals of Ero	ctors who conduct inspections of construction sites received certification under the Tennessee osion Prevention and Sediment Control, Level 1, and construction site plan reviewers a certificate ne Tennessee Erosion Prevention and Sediment Control Design Course, Level 2?
Yes ⊠ No	
B. Proposed Activitie	es:
1. List the BMPs that set of priorities that y	t you will implement in the area of Construction Site Runoff Program. These should be based on a you have identified in the area of Construction Site Runoff Program. Provide a short descriptive

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PROPOSED BEST MANAGEMENT PRACTICES FOR CONSTRUCTION SITE RUNOFF PROGRAM

name to the BMP in the left column and more description in the right column.

BMP	Name	DESCRIPTION
3A.	Ordinance	Update Ordinance to meet required criteria for new MS4 permit
	Review	
3B.	Land	Documentation and evaluation of procedures for reviewing Land Disturbance Permits
	Disturbance	
	Reviews	
3C.	Erosion and	Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as
	Sediment	standards for erosion prevention and sediment control
	Handbook	
3D.	Inspections and	Review effectiveness of inspection protocols and enforcement procedures
	Enforcement	

If you have additional BMPs to list, include in a separate attachment.

- 2. Describe specific groups that will be targeted, if applicable: Contractors
- C. Measurable Goals and Implementation Milestones

Attached at the end of this NOI is an addendum to list BMP Measurable Goals and Implementation Milestones. You must complete the addendum, providing more details on the goals and milestones for each BMP outlined in this NOI.

#### D. Administrative Information

ADMINISTRATIVE INFORMATION FOR CONSTRUCTION SITE RUNOFF PROGRAM			
PRIMARY CONTACT POSITION OR TITLE			
Heath Blaylock	Stormwater Coordinator		

Identify other Department(s) that will be involved and their role.

OTHER DEPARTMENT(S)	ROLE
N/A	

Identify if you will partner with another MS4 Operator, or with another institution (e.g. Chamber of Commerce, Environmental interest organizations, civic groups) in order to carry out the chosen BMPs.

ENTITY	BMP
N/A	9

Will another governmental entity be responsible for implementing one or more chosen BMPs? If so, identify the entity and which BMP(s) it will implement. Include a copy of the interlocutory agreement, or contract, or proposed agreement with execution schedule.

ENTITY	BMP
N/A	

## SECTION 4 - PERMANENT STORMWATER MANAGEMENT AT NEW DEVELOPMENT AND REDEVELOPMENT

#### A. Current Activities:

The following is a set of questions on your current Permanent Stormwater Management in New Development and Redevelopment Program. These questions are intended to highlight minimum program requirements under the MS4 permit. For MS4s who have not been previously covered under an MS4 permit, each element not currently performed

must be implemented by the dates identified in Sub-part 4.1.1 of the permit. Thus, each question with a "No" answer must be addressed with a solution in the MS4's proposed program.

manageme For exampl	ent from new developm	ent or redevelop equirements, zor	ment projective	cts that result in land one control in the control	ess permanent stormwater runoff disturbance of one acre or more? ant removal controls; stormwater
Yes 🛚	No 🗌		i ä		
strategies in personnel ( subdivision effectivener	mplemented, Best Mar by title): <u>There is no z</u> plats to ensure minim	nagement Praction oning in the City um buffer required on calculations as	ces allowed of Crossvill ements are re required	, technical guidance, le, but the Planning C met. The Stormwate for submittal on prope	uctural strategies, describing responsible departments, and coordinator Kevin Dean reviews r Coordinator will review BMP's for erty of 1 acre or more or part of a
manageme	currently have an ordinant from new developm no, proceed to the nex	ent and redevelo	opment proj	ects? If yes, reference	rmanent stormwater runoff ce the page number and paragraph t plans review.
Yes ⊠	No 🗌	Page Number Detention Police		Paragraph Number	Chart
	ordinance or regulato er and paragraph num		equire contr	ols to treat pollutants	in stormwater runoff? If yes, note
Yes ⊠	No 🗌	Page Number Detention Police	_	Paragraph Number	<u>6</u>
new develo that are par	pment or redevelopme	ent projects great	ter than or e	equal to one acre, inc	controls be implemented for any luding projects less than one acre our small MS4? If yes, note page
Yes ⊠	No 🗌	Page Number	<u>6</u>	Paragraph Number	1
	ordinance or regulato age number and parag		ontain or ret	ference technical star	ndards for water quality controls? If
Yes 🛚	No 🗌	Page Number	<u>7</u>	Paragraph Number	<u>1,2,4</u>
6. Does the ordinance or regulatory mechanism clearly define the criteria for submittal -who must submit - of permanent stormwater management design information or plans? If yes, note page number and paragraph number.					
Yes 🛚	No 🗌	Page Number	<u>5</u>	Paragraph Number	1
7. Does the ordinance or regulatory mechanism require approval prior to construction of permanent stormwater management controls? If yes, note page number and paragraph number.					
Yes ⊠	No 🗌	Page Number Detention Police		Paragraph Number Policy	1 Detention
8. Does the ordinance or regulatory mechanism require re-submittal of permanent stormwater management design information or plans if site plans change after the initial design has been approved? If yes, note page number and paragraph number.					
Yes 🗌	No 🖂	Page Number		Paragraph Number	

		regulatory mechanism give the MS4 owner/operator the authority to penalize the owner of anagement controls for violations? If yes, note page number and paragraph number.
Yes ⊠	No 🗌	Page Number 7 and 14 Paragraph Number 4 and 11
adequat	e and long-term o	regulatory mechanism require that permanent stormwater management controls have peration and maintenance? If yes, note page number and paragraph number. If no, mer/operator maintains permanent stormwater management controls:
Yes ⊠	No 🗌	Page Number 7 Paragraph Number 4
		regulatory mechanism require establishment and maintenance of water quality riparian velopment and redevelopment?
Yes ⊠	No 🗌	
departm	ent, zoning board	presently have in place a technical review process (i.e. engineering department, planning ) that evaluates new development and redevelopment with regard to the impact that noff will have on receiving streams?
Yes ⊠	No 🗌	
personn submitte plats to effective B. Propo	el (by department ed: There is no zor ensure minimum to ness on the site and seed Activities:  BMPs that you will e based on a set	rative or a flow chart of the review process, describing the process steps, responsible title and contact person), and criteria used for evaluation of information or plans that are ning in the City of Crossville, but the Planning Coordinator Kevin Dean reviews subdivision buffer requirements are met. The Stormwater Coordinator will review BMP's for and use TNRAT to view what calculations have been submitted.  I implement in the area of the Permanent Stormwater Management Plans Review. These of priorities that you have identified in the area of the Permanent Stormwater Management short descriptive name to the BMP in the left column and more description in the right
PROPO	SED BEST MANA	AGEMENT PRACTICES FOR PERMANENT STORMWATER PLANS REVIEW
BMP	Name	DESCRIPTION
4A.	Ordinance	Update Ordinances and Policies
4B.	Checklist	Review Plans Checklist to ensure all specifications are met
4C.	Training	Keep updated on training such as Level 2 Erosion Prevention and Sediment Control
4D.	Review Runoff Calculations	Use TNRAT to review submitted calculations.
If you ha	ve additional BMF	Ps to list, include in a separate attachment.
Describe the specific groups that will be targeted, if applicable? City of Crossville Employees		
C. Measurable Goals and Implementation Milestones:		
must cor	nplete the addeno	NOI is an addendum to list BMP Measurable Goals and Implementation Milestones. You lum, providing more details on the goals and milestones for each BMP outlined in this NOI.
D. <u>Aumil</u>	nistrative Informati	<u> </u>
ADMINIS	STRATIVE INFOR	RMATION FOR PERMANENT STORMWATER MANAGEMENT PLANS REVIEW
	Y CONTACT	POSITION OR TITLE
Heath Bl		Stormwater Coordinator

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OTHER

Identify other Department(s) that will be involved and their role.

ROLE

DEPARTMENT(S)			
Planning	Review of plans to insure buffers are bei	ng met.	
	with another MS4 Operator, or with another ganizations, civic groups) in order to carry or		per of Commerce,
ENTITY	ВМР		
N/A			
	ll entity be responsible for implementing one mplement. Include a copy of the interlocutory		
ENTITY	BMP		
N/A			
SECTION 5 - POLLUTIO	N PREVENTION/GOOD HOUSEKEEPING	FOR MUNICIPAL OPE	RATIONS
OLOTIONO I OLLOTIO	THE VEH THOU COOR HOUSE REEL HAS	TOTAL OF E	
A. <u>Current Activities</u> :			
Program. These questions	uestions on your current Pollution Preventio s are intended to highlight minimum progran rer must be addressed with a solution in the	n requirements under t	he MS4 permit. Each
employees responsible fo generate and/or store materials may include, but	current Pollution Prevention/Good Houseker r municipal operations at facilities within the terials which constitute a potential pollutant of t are not limited to, lubricants, fuels, sand, g equipment, and other wastes.	jurisdiction of the pern of concern for MS4s? I	nittee that handle, Examples of these
Yes ⊠ No □			
	ocumented? If yes, describe training and moon what training employees have had.	ethod of record-keepin	g: <u>Training Videos and</u>
Yes ⊠ No □			
3. Has the MS4 owner/ope all qualifying municipal inc Certification form.	erator obtained a Tennessee Multi-Sector G lustrial activities? If yes, give permit numbe	eneral Permit or a no- rs or attach copies of t	exposure certification for he No-Exposure
Yes ☐ No ⊠	Permit Numbers(s)	N 19 12	
streets, roads, highways, outdoor storage areas, sa storage, and transfer static facilities. Indicate if an ope	is or facilities that have a potential for contain municipal parking lots, maintenance and sto lt/sand storage locations, snow disposal are ons. If there is more than one facility for a gi eration and maintenance plan, which include from related structural and non-structural sto	rage yards, fleet or ma as operated by the MS ven type of operation; s maintenance activitions	aintenance shops with 64, and waste disposal, give the number of such es, schedules and the
FACILITY	OR TYPE OF OPERATION	NUMBER OF FACILITIES	OPERATION AND MAINTENANCE PLAN

		IMPLEMENTED?
Veolia Wastewater Treatment Plant	1	Yes ⊠ No □
Wyatt Court Stock Pile	1	Yes ⊠ No 🗌
Chestnut Hill Landfill	1	Yes ⊠ No □
		Yes 🗌 No 🗌
		Yes 🗌 No 🗌
		Yes ☐ No ☐
		Yes 🗌 No 🗌
		Yes ☐ No ☐
		Yes 🗌 No 🗌
		Yes 🗌 No 🔲
		Yes ☐ No ☐
		Yes No
		Yes ☐ No ☐
		Yes No

#### B. Proposed Activities:

List the BMPs that you will implement in the area of the Pollution Prevention and Good Housekeeping Program. These should be based on a set of priorities that you have identified in the area of the Pollution Prevention and Good Housekeeping Program. Provide a short descriptive name to the BMP in the left column and more description in the right column.

In addition to considering industrial-type operations, you must also consider municipal infrastructure, and related maintenance activities, maintenance schedules and long-term inspection procedures for structural controls and the proper disposal of waste from storm sewers/catch basins.

PROP	PROPOSED BEST MANAGEMENT PRACTICES FOR POLLUTION PREVENTION AND HOUSEKEEPING		
BMP	Name	DESCRIPTION	
5A.	Revisit Municipal Sites	Look at Municipal owned sites and make sure all pollution prevention measures are being met.	
5B.	Training	Train city employees through out different departments on pollution prevention and good housekeeping.	
5C.	Roadway and Storm Drain Maintenance	Evaluation of roadway and storm drainage maintenance procedures in order to minimize discharges of pollutants during maintenance operations.	
5D.	Review Ordinance	Review ordinances to stay in compliance with current permits	

If you have additional BMPs to list, include in a separate attachment.

Provide specific groups that will be targeted, if applicable: N/A

#### C. Measurable Goals and Implementation Milestones:

Attached at the end of this NOI is an addendum to list BMP Measurable Goals and Implementation Milestones. You must complete the addendum, providing more details on the goals and milestones for each BMP outlined in this NOI.

### D. Administrative Information:

ADMINISTRATIVE INFORMATION FOR POLLUTION PREVENTION AND HOUSEKEEPING		
PRIMARY CONTACT	POSITION OR TITLE	
Heath Blaylock	Stormwater Coordinator	

Identify other Department(s) that will be involved and their role.

racitally out of Dopartinonale	THAC WILL BO WITCH CALLETTE TOTAL
OTHER DEPARTMENT(S)	ROLE
Street Department	Maintence with salt storage and street sweeper debris

Maintenance Keeping all vehicle maintenance under roof and keeping up with pollution preven	
Department	City owned gas and diesel pumps.

Identify if you will partner with another MS4 Operator, or with another institution (e.g. Chamber of Commerce, Environmental interest organizations, civic groups) in order to carry out the chosen BMPs.

ENTITY	ВМР	
N/A		

Will another governmental entity be responsible for implementing one or more chosen BMPs? If so, identify the entity and which BMP(s) it will implement. Include a copy of the interlocutory agreement, or contract, or proposed agreement with execution schedule.

ENTITY	BMP
N/A	

## ADDENDUM TO SMALL MS4 NPDES PERMIT NOI - BMPs MEASURABLE GOALS AND MILESTONES

The purpose of this addendum is to record the measurable goals for each BMP, and the dates (month and year) by which interim actions are to be accomplished. Space is given for four BMPs for each of the six minimum measures. If necessary, attach additional BMP MEASURABLE GOALS AND MILESTONES as a separate attachment.

Measurable goals are BMP design objectives, or goals that will quantify the progress of implementing the actions or performance of a BMP. They are ways to measure activities or effects of a BMP. For each of the six minimum measures and for each BMP, define the measurable goal you will use to monitor effectiveness of this BMP. The BMPs you list here should match exactly those given in Part V., 1-5 of this NOI. For purposes of this NOI, the Public Education and Outreach and Public Involvement/Participation minimum measures have been combined.

For each BMP, establish milestones for implementation. These tables are set up for once/year milestones. You may change the milestone dates to time frames less than one year.

RACTICES FOR PUBLIC EDUCATION AND PUBLIC PARTICIPATION
MEASURABLE GOALS AND MILESTONES
Provide a functional and educational stormwater website
Review website to see what new ideas we can add to help the public understand
stormwater.
Update website with new Ordinances and Policies
Maintain Website
Maintain Website
Maintain and Review Website to monitor usage
MEASURABLE GOALS AND MILESTONES
Produce more Brochures for specific groups such as schools, businesses and
contractors.
Find brochures for target audiences
Distribute Brochures
Distribute Brochures
Distribute Brochures
Distribute Brochures

MEASURABLE GOALS AND MILESTONES	
Provide training to employees and the general public to enhance knowledge on	
Stormwater	
Setup and Maintain an employee training schedule	
Start training sessions for new and existing employees and offer training oppurtunities	
to the public by website.	
Maintain training and Level 1 TNEPSC Certifications	
Maintain training	
Maintain training and review past training methods to see if anything needs updated	
MEASURABLE GOALS AND MILESTONES	
Use of Media for a broader audience	
Use Media such as broadcasting, publishing, and the Internet to inform the public	
Use Media such as broadcasting, publishing, and the Internet to inform the public	
Use Media such as broadcasting, publishing, and the Internet to inform the public	
Use Media such as broadcasting, publishing, and the Internet to inform the public	
Use Media such as broadcasting, publishing, and the Internet to inform the public	

BEST MANAGEMENT PRACTICES FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION	
BMP 2A	MEASURABLE GOALS AND MILESTONES
Goal(s)	Review and Update Oufall Map
Milestone Year 1	Look for hot spot areas to add to outfall map

Milestone Year 2	Update outfall map using GIS			
Milestone Year 3	Update Map to include annexed areas			
Milestone Year 4	Update Map to include annexed areas			
Milestone Year 5	Update Map to include annexed areas			
BMP 2B	MEASURABLE GOALS AND MILESTONES			
Goal(s)	Dry weather screening to prevent a discharge from spreading during a rain event.			
Milestone Year 1	Dry weather Screening to prevent discharge before rain events.			
Milestone Year 2	Dry weather Screening to prevent discharge before rain events.			
Milestone Year 3	Dry weather Screening to prevent discharge before rain events.			
Milestone Year 4	Dry weather Screening to prevent discharge before rain events.			
Milestone Year 5	Dry weather Screening to prevent discharge before rain events.			

MEASURABLE GOALS AND MILESTONES				
Employee Illicit Discharge Training to produce a more knowledgeable staff.				
Train employees from different departments on what to look for and do, if an illicit disharge is present				
Train employees from different departments on what to look for and do, if an illicit disharge is present				
Train employees from different departments on what to look for and do, if an illicit disharge is present				
Train employees from different departments on what to look for and do, if an illicit disharge is present				
Train employees from different departments on what to look for and do, if an illicit disharge is present				
MEASURABLE GOALS AND MILESTONES				
Take detailed GPS points of our storm sewers to know flow routes.				
GPS and Update storm sewer map				
GPS and Update storm sewer map				
GPS and Update storm sewer map				
GPS and Update storm sewer map				
GPS and Update storm sewer map				

BEST MANAGEMENT PRACTICES FOR CONSTRUCTION SITE RUNOFF PROGRAM				
BMP 3A	MEASURABLE GOALS AND MILESTONES			
Goal(s)	Review Ordinance to update with current Permits			
Milestone Year 1	Update Ordinance to meet required criteria for new MS4 permit			
Milestone Year 2	Update Ordinance to meet required criteria for new MS4 permit			
Milestone Year 3	Review Updated Ordinaces to see if anything needs to be changed			
Milestone Year 4	Review Updated Ordinaces to see if anything needs to be changed			
Milestone Year 5	Review Updated Ordinaces to see if anything needs to be changed			
BMP 3B	MEASURABLE GOALS AND MILESTONES			
Goal(s)	Review Land Disturbance Application to provide a detailed and rapid review process			
Milestone Year 1	Evaluate procedures for reviewing Land Disturbance Permits			
Milestone Year 2	Evaluate procedures for reviewing Land Disturbance Permits			
Milestone Year 3	Update land disturbance application to meet all required criteria			
Milestone Year 4	Update land disturbance application to meet all required criteria			
Milestone Year 5	ilestone Year 5 Update land disturbance application to meet all required criteria			

BMP 3C	MEASURABLE GOALS AND MILESTONES		
Goal(s)	Provide the public with knowledgeable material to reduce to chances of stormwater runoff		
Milestone Year 1	Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as		

standards for erosion prevention and sediment control			
Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as			
standards for erosion prevention and sediment control			
Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as			
standards for erosion prevention and sediment control			
Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as			
standards for erosion prevention and sediment control			
Provide TDEC Erosion Prevention and Sediment Control manuals for Public usage as			
standards for erosion prevention and sediment control			
MEASURABLE GOALS AND MILESTONES			
Inspections and Enforcement			
Review effectiveness of inspection protocols and enforcement procedures			
Review effectiveness of inspection protocols and enforcement procedures  Review effectiveness of inspection protocols and enforcement procedures			
Review effectiveness of inspection protocols and enforcement procedures			
Review effectiveness of inspection protocols and enforcement procedures			

BEST MANAGEMENT P	RACTICES FOR PERMANENT (POST-CONSTRUCTION) STORMWATER				
MANAGEMENT PROGE	RAM				
BMP 4A	MEASURABLE GOALS AND MILESTONES				
Goal(s)	To get our Ordinances and Policies up to standards of the new MS4 permit.				
Milestone Year 1	Meet with Stormwater advisory committee				
Milestone Year 2	Meet with Stormwater advisory committee				
Milestone Year 3	Update Ordinances and Policies				
Milestone Year 4	Update Ordinances and Policies				
Milestone Year 5	1 N				
BMP 4B	MEASURABLE GOALS AND MILESTONES				
Goal(s)	Modernize checklists to insure a thorough review process				
Milestone Year 1	Review Plans checklist to ensure all specifications are met				
Milestone Year 2	Review Plans checklist to ensure all specifications are met				
Milestone Year 3 Review Plans checklist to ensure all specifications are met					
Milestone Year 4	Process other MS4 checklists to see if ours needs addressed				
Milestone Year 5					

BMP 4C	MEASURABLE GOALS AND MILESTONES			
Goal(s)	Be as knowledgeable as possible through training and seminars.			
Milestone Year 1	Keep updated on training such as Level 2 Erosion Prevention and Sediment Control			
Milestone Year 2	Attend TNSA conference and other seminars			
Milestone Year 3	Keep undated on training such as Level 2 Erosion Prevention and Sediment Control			
Milestone Year 4	Keen undated on training such as Level 2 Erosion Prevention and Sediment Control			
Milestone Year 5	Keep updated on training such as Level 2 Erosion Prevention and Sediment Control			
BMP 4D	MEASURABLE GOALS AND MILESTONES			
Goal(s)	To get more Engineering firms to submit calculations using TNRAT.			
Milestone Year 1	Use TNRAT to review submitted calculations.			
Milestone Year 2	Use TNRAT to review submitted calculations.			
Milestone Year 3	Host a class on how to use TNRAT for contractors and engineers.			
Milestone Year 4	Get feedback from companies using TNRAT			
	Use TNRAT to review submitted calculations.			

BEST MANAGEMENT PRACTICES FOR MUNICIPAL POLLUTION PREVENTION AND GOOD HOUSEKEEPING			
BMP 5A MEASURABLE GOALS AND MILESTONES			
Goal(s)	Revisit city owned properties to insure pollution prevention and good housekeeping are		

	being used.			
Milestone Year 1	Meet with city department head to review their pollution prevention and good			
	housekeeping process.			
Milestone Year 2	Meet with city department head to review their pollution prevention and good housekeeping process.			
Milestone Year 3	Do city owned property site inspection			
Milestone Year 4	Do city owned property site inspections			
Milestone Year 5	Get feedback from department heads on the review process			
BMP 5B	MEASURABLE GOALS AND MILESTONES			
Goal(s)	City employee training			
Milestone Year 1	Train city employees through out different departments on pollution prevention and good housekeeping.			
Milestone Year 2	Train city employees through out different departments on pollution prevention and good housekeeping.			
Milestone Year 3	Train city employees through out different departments on pollution prevention and good housekeeping.			
Milestone Year 4	Train city employees through out different departments on pollution prevention and good housekeeping.			
Milestone Year 5	lestone Year 5 Train city employees through out different departments on pollution prevention and good housekeeping.			

DMD 50	TARACURARIE COALO AND MUEGTONEO				
BMP 5C	MEASURABLE GOALS AND MILESTONES				
Goal(s)	Keeping city infrastructure pollution free				
Milestone Year 1	Evaluate roadway and storm drainage maintenance procedures, in order to minimize discharges of pollutants during maintenance operations.				
Milestone Year 2	Evaluate roadway and storm drainage maintenance procedures, in order to minimize discharges of pollutants during maintenance operations.				
Milestone Year 3	Evaluate roadway and storm drainage maintenance procedures, in order to minimize discharges of pollutants during maintenance operations.				
Milestone Year 4	Evaluate roadway and storm drainage maintenance procedures, in order to minimize discharges of pollutants during maintenance operations.				
Milestone Year 5	Evaluate roadway and storm drainage maintenance procedures, in order to minimize discharges of pollutants during maintenance operations.				
BMP 5D	MEASURABLE GOALS AND MILESTONES				
Goal(s)	Staying updated on all ordinances on pollution prevention and good housekeeping so the City of Crossville sets and example to the public				
Milestone Year 1	Update and review prevention policies and ordinances				
Milestone Year 2	Update and review prevention policies and ordinances				
Milestone Year 3	Update and review prevention policies and ordinances				
Milestone Year 4	Update and review prevention policies and ordinances				
Milestone Year 5	Update and review prevention policies and ordinances				

FEB 0 1 2017

# CITY OF CROSSVILLE ENGINEERING DEPARTMENT & CONSERVATION COOKEVILLE FIELD OFFICE

## Minimum Requirements for Detention, Drainage, & Infrastructure Design

#### Section I: Definitions

Development – the alteration or modification of a site associated with the redevelopment of property, development of property, change in land use, building additions, paving, grading, drainage improvements, or drainage alterations, etc.

Residential Development (RD) – A residential development is any development of a single recorded residential lot with a single-family house or duplex unit.

Single-Family Residential (SFR) – A residential development of any multiple of lots being developed for residential uses for single-family houses or duplex units.

Commercial Development (CD) – Any development which contains a building or a structure and which is not a residential development or a single-family development.

Other Development (OD) – Any development which does not contain a building or structure and which is not a residential development or a single-family development.

First Flush or Water Quality Volume – The first one-half (1/2) inch fraction of direct runoff from a site produced by a rainfall event.

Site Plan Map – A plan at a scale of 1'' = 100' or less that depicts the property boundaries and contours of the ground surface at an interval not to exceed 5 feet.

#### **Section II: General Requirements**

All permanent drainage structures including storm sewers, detention basins, detention, controls in lieu of detention, etc., with the exception of driveway culverts limited to 40 feet in length must be sized and designed by a Professional Engineer. If a site requires any of these structures, the site plan, grading plans, SWPPP, or any other required documents must be prepared and sealed by the Professional Engineer.

Any developments that require submission of plans, reports, or documents to be prepared and sealed by a Professional Engineer shall submit calculations for the 2-year, 5-year, and 10-year design storms.

All infrastructure (drainage swales, pipes, inlets, catch basins, cross-drains, under-drains, detention basins, driveway culverts, etc.) and control measures for developments related to onsite and offsite drainage design shall provide adequate capacity to pass the 10-year design storm based on post-development conditions. All discharges from run-on areas shall be included in the design and adequate capacity shall be installed to accommodate these discharges. All structures shall be capable of safely bypassing the 100-year storm event without damage to the structure or the system.

All infrastructure pipes and structures built under streets within the 100-year floodplain shall be adequately sized to pass the 100-year storm event and shall provide 1 foot of freeboard. No structures

or fills shall be constructed within the 100-year floodplain which would create more than 1 foot of backwater. All developments that contain any structures within a 100-year floodplain shall require all documents and design to be prepared and sealed by a Professional Engineer and the hydraulic report shall include the calculations for all areas of the development for the 100-year storm event.

All detention shall be provided on the property for which the detention is required unless waived by the City of Crossville Engineering Department. In the event of a waiver for use of regional detention for the development, an explicit note shall be provided on the design drawings as well as the location of all drainage and access easements.

Any infrastructure within a drainage area that ultimately flows into the right of way of any state route or highway must follow the Tennessee Department of Transportation Drainage Manual.

The presence of a wetland, stream, or drainage problem on a property may require a drainage study by a Professional Engineer. The City of Crossville Engineering Department may request any and all additional studies deemed necessary when a wetland, stream, or drainage problem exists on a property.

#### Section III: Site Development Overview

There are four types of site development projects for the purposes of determining requirements for a site development permit. The term "site development" also includes any redevelopment of a property (i.e., changing the land use or occupancy use), building additions, paving, regarding, drainage improvements/alterations, etc.

The first objective of permitting discharges associated with development is to improve the water quality by slowing the runoff volumetric flow rate, decreasing runoff, and infiltrating as much as possible into the soil to recharge the groundwater table. Some measures may be used to improve stormwater quality, depending on the nature of the land use and expected pollutants are as follows: bio-retention areas, rain gardens, pervious concrete, and check dams. Sustainable development is encouraged as a method to decrease runoff and improve infiltration.

The secondary objective of permitting discharges associated with development is to improve water quality through the use of treatment techniques applied to the water quality volume. This objective is only applied to commercial developments and other developments.

Requirements vary for each of the four types of site development projects and also based upon the sizes of the development. The following chart is a quick summary of the varying requirements:

	of Site opment:	Applicable Section	Site Development Plan Required?	Point at which Post- construction detention and/or alternate controls is required	Water Quality Volume Treatment Required?
RD	Residential Development	IV	Yes	>5 acres total disturbed area , or > ½ acre impervious area, or > 20% impervious area	No
SFR	Single-Family Residential	V	Yes	>10 acres total disturbed area, or > 1 acre impervious area, or >8 lots	No
CD	Commercial Development	VI	Yes	If post-development flows are 2 cfs or more than pre- development flows	Yes
OD	Other Development	VII	Yes	If post-development flows are 2 cfs or more than pre- development flows	Yes

#### Notes:

- 1. The post-development discharge from all required detention shall not exceed pre-development flows plus 2 cfs.
- 2. All permanent drainage structures including storm sewers, detention basins, detention, controls in lieu of detention, etc., with the exception of driveway culverts limited to 40 feet in length must be sized and designed by a Professional Engineer. If a site requires any of these structures, the site plan, grading plans, SWPPP, or any other required documents must be prepared and sealed by the Professional Engineer.

## Section IV: Residential Development (RD)

Residential development is defined as the development of a single recorded residential lot (single-family house or duplex unit). The entire property is assumed to be disturbed until a site plan is submitted to indicate differently. The site plan is not required to be stamped by a Professional Engineer, unless additional information is specifically requested by the City of Crossville Engineering Department due to special or unusual circumstances. Adequate erosion control measures must be used to ensure that no sediment leaves the property.

A stormwater detention basin is not required unless the residential property has more than 5 acres of total disturbed area or the property contains over one-half (1/2) acre of impervious area or has more than 20% impervious area.

## Section V: Single-Family Residential (SFR) (includes housing subdivisions)

Single-family residential development is defined as any multiple lots being developed of a residential nature (such as a housing subdivision) for single-family houses or duplex units on each lot.

A single-family residential development with less than 10 acres of total disturbed area, less than 1 acre of impervious area, and less than 8 lots must submit a site development plan on a topographic map. The entire property is assumed to be disturbed until a site plan is submitted to indicate differently. The site plan is not required to be stamped by a Professional Engineer, unless additional information is specifically requested by the City of Crossville Engineering Department due to special or unusual circumstances.

A single-family residential development than has more than 10 acres of total disturbed area, or more than 1 acre of impervious area, or more than 8 lots must submit a site development plan on a topographic map prepared and sealed by a Professional Engineer. A stormwater detention basin will be required unless an alternate plan of controls that provide equivalent or better control than the detention basin is submitted as part of the site development plan. The discharge from the developed site must be no more than 2 cfs above the pre-development discharge. Detention basins are highly discouraged and alternatives are encouraged for single-family residential developments due to the maintenance requirements of detention basins.

Underground detention systems are not permitted for single-family residential developments of any size.

# Section VI: Commercial Development (CD) (includes apartments and condominiums)

Commercial development is defined as any development which contains a building or a structure, and which is not a residential development or a single-family development. This includes apartment buildings, condominium buildings, schools, churches, charity organizations, and other land uses which are not usually defined as being "commercial" in nature. In other words, this category also includes industrial, educational, institutional, recreational, and many other land uses.

All commercial developments must submit a site development plan on a topographic map prepared and sealed by a Professional Engineer. A stormwater detention basin or system is required for all sites at which the post-development peak rate of discharge is more than 2 cfs higher than the pre-development discharge. When detention is required, the detention system must limit the discharge from the site to no more than 2 cfs higher than the pre-development discharge.

All commercial developments require the water quality volume from the first flush to be retained and treated. The water quality volume shall be uniformly discharged over a period of not less than 24 hours and not more than 72 hours.

#### Section VII: Other Development (OD)

Other development is defined as any development which does not contain a building or structure, and which is not a residential development or a single-family development. This type of site development may include such items as parking lots, recreational fields, driveways, entrances, or streets. An OD site development may include right-of-way owned by the city or the state.

All other developments must submit a site development plan on a topographic map prepared and sealed by a Professional Engineer. A stormwater detention basin or system is required for all sites at which the post-development peak rate of discharge is more than 2 cfs higher than the pre-development discharge. When detention is required, the detention system must limit the discharge from the site to no more than 2 cfs higher than the pre-development discharge.

All other developments require the water quality volume from the first flush to be retained and treated. The water quality volume shall be uniformly discharged over a period of not less than 24 hours and not more than 72 hours.

# ENVIRONMENT & CONSERVATION

COOKEVILLE FIELD OFFICE

## CITY OF CROSSVILLE, TENNESSEE Storm Water Policy Site Inspection and Violation Enforcement

Inspections shall be performed to ensure that vegetation, erosion and sediment control measures and other protective measures identified in the storm water pollution prevention plan are being maintained in good and effective operating condition.

#### Owner/Operator Inspections

Inspections required for all developments requiring a land disturbance permit.

- A. Inspections already required by other governing entities such as TDEC, TDOT, etc.
- B. Inspection documentation shall be submitted to the City of Crossville.
- C. Final storm water management best management practices (BMPs) shall be inspected and certified that they are in accordance with the approved plans prior to the issuance of a certificate of occupancy.

Additional inspections required for all major and minor subdivisions, site plans and other major developments:

- A. For all sites greater than one acre in size or being a part of a larger development, Pre-Construction storm water management BMPs shall be inspected and certified that they are in accordance with the approved plans by an engineer licensed in the State of Tennessee.
- B. For all sites with land disturbance activities greater than one (1) acre, Construction storm water management BMPs shall be inspected and certified that they are in accordance with the approved plans by an engineer licensed in the State of Tennessec, prior to the granting of a building permit.
- C. Post Construction storm water management BMPs shall be inspected and certified that they are in accordance with the approved plans by an engineer licensed in the State of Tennessee, prior to the release of surety.

#### City Inspections

- A. City inspections may include, but are not limited to, the following:
  - 1. An initial site inspection prior to storm water pollution prevention plan approval;
  - 2. A bury inspection prior to burial of any underground drainage structure(s);
  - Erosion prevention and sediment control inspections as necessary to ensure effective control of erosion and sedimentation;
  - Periodic inspections to ensure storm water facilities are being properly maintained;
     and
  - 5. Final inspection when all work, including installation of storm management facilities, has been completed.

#### Enforcement

- A. Enforcement authority. The City of Crossville shall have the authority to issue Notices of Violation and citations, to impose the civil penalties provided for in this section, and to institute appropriate actions or proceedings.
- B. Notification of Violation (NOV).
  - 1. Written Notice. Whenever the Director of Engineering, the Storm Water Coordinator or his designee finds that an owner/operator or any other person discharging storm water has violated or continues to be in violation of these Regulations or permit or order issued hereunder, he may serve upon such person a written NOV. In addition to the NOV, whenever the Director of Engineering, the Storm Water Coordinator or his designee finds that any permittee, person, company or facility owning, occupying or operating on any premises has violated or continues to be in violation of these Regulations or permit or order issued hereunder, he may revoke said permit issued by the City. Any permit issued erroneously in violation of any applicable federal, state or local law or regulations may be revoked. Notice of such revocation shall be in accordance with the notification requirements for NOV's.

Within a date certain established by this Notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, shall be submitted to the City of Crossville. Said plan shall identify specific actions to be taken to correct the violation. Submission of this plan shall not relieve the discharger of liability for any violations

occurring before or after receipt of the NOV.

- 2. Consent Orders. The Director of Engineering, the Storm Water Coordinator or his designee is hereby empowered to enter into consent orders, assurances of voluntary compliance or any other similar document that establishes an agreement with the owner/operator or any other person responsible for the non-compliance. Such orders, assurances or similar documents shall identify specific actions to be taken to correct the non-compliance, within a date certain as specified by said orders, assurances or similar documents. Consent orders shall have the same force and effect as compliance orders issued pursuant to paragraph B.3.
- 3. Compliance Orders. Whenever the Director of Engineering, the Storm Water Coordinator or his designee finds that an owner/operator or any other person has violated or continues to be in violation of these Regulations or permit or order issued hereunder, he may issue a compliance order to the violator directing that, within a date certain, adequate structures or devices shall be installed or procedures implemented, and that said structures or devices are properly operating and said procedures are being complied with. Compliance orders may also contain such other requirements as may be reasonably necessary and appropriate to address the non-compliance, including the construction of appropriate structures, installation of devices, self-monitoring and management practices.
- 4. Cease and Desist Orders. Whenever the Director of Engineering, Storm Water Coordinator or his designee finds that an owner/operator or any other person has violated or continues to be in violation of these Regulations or permit or order issued hereunder, he may issue an order to cease and desist all such violations and direct those owners/operators or any other persons in non-compliance to:
  - a. Comply forthwith; or
  - b. Take such appropriate remedial or preventative action as may be necessary to properly address a continuing or threatened violation, including ceasing operations and terminating the discharge.
  - c. Conflicting standards. Where there is a conflict between any standards contained in these Regulations and the BMP manual adopted by the City of Crossville, pursuant to these Regulations, the strictest standards shall prevail.

Show Cause Hearing. The Director of Engineering, Storm Water Coordinator or his designee may order an owner/operator or any other person who violates these Regulations or permit or order issued hereunder, to show just cause as to why a proposed enforcement action should not be undertaken. Notice shall be served on said owner/operator or any other person specifying the date, time and location for the show cause hearing, the proposed enforcement action and the reasons for such action. The show cause meeting notice shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days prior to said hearing.

ADOPTED, this Day of Second 2008.

Mayor

Councilman

Councilman

Councilman

Councilman

Councilman

Councilman

ATTEST

Sally Coleshy

**Print** 

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Crossville, TN Code of Ordinances

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ENVIRONMENT & CONSERVATION COOKEVILLE FIELD OFFICE

# **CHAPTER 8: STORM WATER**

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#### Editor's note:

This chapter was amended during the June 9, 2009, "Change 2".

## § 14-801 GENERAL PROVISIONS.

- (A) It is the purpose of this chapter to:
- (1) Protect, maintain and enhance the environment of the city and the public health, safety and the general welfare of the citizens of the city, by controlling discharges of pollutants to the city's municipal separate storm water system and to maintain and improve the quality of the receiving waters into which the storm water outfalls flow, including, without limitation, lakes, rivers, streams, ponds, wetlands and groundwater of the city;
- (2) Enable the city to comply with the National Pollution Discharge Elimination System (NPDES) permit and applicable regulations, 40 C.F.R. § 122.26, for storm water discharges; and

- (3) Allow the city to exercise the powers granted in T.C.A. § 68-221-1105, which provides that, among other powers municipalities have with respect to storm water facilities, is the power by ordinance or resolution to:
- (a) Exercise general regulation over the planning, location, construction and operation and maintenance of storm water facilities in the municipality, whether or not owned and operated by the municipality;
- (b) Adopt any rules and regulations deemed necessary to accomplish the purposes of this statute, including the adoption of a system of fees for services and permits;
- (c) Establish standards to regulate the quantity of storm water discharged and to regulate storm water contaminants as may be necessary to protect water quality;
- (d) Review and approve plans and plats for storm water management in proposed subdivisions or commercial developments;
- (e) Issue permits for storm water discharges, or for the construction, alteration, extension or repair of storm water facilities;
- (f) Suspend or revoke permits when it is determined that the permittee has violated any applicable ordinance, resolution or condition of the permit;
- (g) Regulate and prohibit discharges into storm water facilities of sanitary, industrial or commercial sewage or waters that have otherwise been contaminated; and
- (h) Expend funds to remediate or mitigate the detrimental effects of contaminated land or other sources of storm water contamination, whether public or private.
  - (B) The city shall administer the provisions of this chapter.

(Ord. 1167, passed 4-24-2008)

## § 14-802 DEFINITIONS.

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning. Words used in the singular shall include the plural, and the plural shall include the singular; words used in the present tense shall include the future tense. The word "shall" is mandatory and not discretionary. The word "may" is permissive. Words not defined in this section shall be construed to have the meaning given by common and ordinary use as defined in the latest edition of Webster's Dictionary.

AS-BUILT PLANS. Drawings depicting conditions as they were constructed.

**AQUATIC BUFFER.** A strip of undisturbed native vegetation, either original or re-established, that borders streams, wetlands and springs.

**AQUATIC CONSTRUCTION BUFFER.** A strip of undisturbed native vegetation, either original or re-established, that borders, streams, wetlands and springs that is maintained during construction and until the site is established.

**AQUATIC CORRIDOR.** An area of land and water which is important to the integrity and quality of a stream, wetland and spring. An **AQUATIC CORRIDOR** consists of the actual body of water and the adjacent aquatic buffer.

**BEST MANAGEMENT PRACTICES** or **BMPs.** Physical, structural and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water, that have been approved by the city, and that have been incorporated by reference into this chapter as if fully set out therein. (Note: See § 14-804(A)(2) for recommended BMP manual.]

**CHANNEL.** A natural or artificial watercourse with a definite bed and banks that conducts flowing water continuously or periodically.

**CONTAINMENT.** Any physical, chemical, biological or radiological substance or matter in water.

**DESIGN STORM EVENT.** A hypothetical storm event, of a given frequency interval and duration, used in the analysis and design of a storm water facility.

**DEVELOPMENT.** Any human-made change, involving construction or reconstruction, to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, clearing, paving, excavation, drilling operations or other land disturbances.

**DISCHARGE.** Dispose, deposit, spill, pour, inject, seep, dump, leak or place by any means, or that which is disposed, deposited, spilled, poured, injected, seeped, dumped, leaked or placed by any means including any direct or indirect entry of any solid or liquid matter into the municipal separate storm sewer system.

**EASEMENT.** An acquired privilege or right of use or enjoyment that a person, party, firm, corporation, municipality or other legal entity has in the land of another.

*ELICIT CONNECTIONS.* Illegal and/or unauthorized connections the municipal separate storm water system whether or not the connections result in discharges into that system.

**ELICIT DISCHARGES.** Any discharge to the municipal separate storm sewer system that is not composed entirely of storm water and not specifically exempted under § 14-803(C).

**EROSION.** The removal of soil particles by the action of water, wind, ice or other geological agents, whether naturally occurring or acting in conjunction with or promoted by human activities or effects.

**EROSION AND SEDIMENT CONTROL PLAN.** A written plan (including drawings or other graphic representation(s)) that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

**FLOODPLAIN.** For a given flood event, that area of land temporarily covered by water which adjoins a watercourse.

**FLOODWAY.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

**HOTSPOT** or **PRIORITY AREA.** An area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in storm water.

**IMPERVIOUS AREA.** Impermeable surfaces, such as pavement or rooftops, which prevent the percolation of water into the soil.

LAND DISTURBING ACTIVITY. Any activity on property that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. LAND DISTURBING ACTIVITIES include, but are not limited to, development, redevelopment, demolition, construction, reconstruction, clearing, grading, filling and excavation.

**MAINTENANCE.** Any activity that is necessary to keep a storm water facility in good working order so as to function as designed. **MAINTENANCE** shall include complete reconstruction of a storm water facility if reconstruction is needed in order to restore the facility to its original operational design parameters. **MAINTENANCE** shall also include the correction of any problem on the site property that may directly impair the functions of the storm water facility.

**MAINTENANCE AGREEMENT.** A document recorded in the land records that acts as a property deed restriction, and which provides for long-term maintenance of storm water management practices.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). The conveyances owned or operated by the municipality for the collection and transportation of storm water, including the roads and streets and their drainage systems, catch basins, curbs, gutters, ditches, human-made channels and storm drains.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT or NPDES PERMIT. A permit issued pursuant to 33 U.S.C. § 1342. A permit program that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

NATIVE VEGETATION. Indigenous plants to the Cumberland plateau.

**OFF-SITE FACILITY.** A structural BMP located outside the subject property boundary described in the permit application for land development activity.

**ON-SITE FACILITY.** A structural BMP located within the subject property boundary described in the permit application for land development activity.

**PEAK FLOW.** The maximum instantaneous rate of flow of water at a particular point resulting from a storm event.

**PERSON.** Any and all persons, natural or artificial, including any individual, firm or association and any municipal or private corporation organized or existing under the laws of this or any other state or country.

**PLANTING PLAN.** A re-vegetative plan approved by the city.

PRIORITY AREA. "Hot spot", as defined herein.

**RUNOFF.** The portion of the precipitation on a drainage area that is discharged from the area into the MS4.

**SEDIMENT.** Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity or ice and has come to rest on the earth's surface either above or below sea level.

**SEDIMENTATION.** Soil particles suspended in storm water that can settle in stream beds and disrupt the natural flow of the stream.

**SOILS REPORT.** A study of soils on a subject property with the primary purpose of characterizing and describing the soils. The **SOILS REPORT** may be prepared using the NRCS land use data.

**STABILIZATION.** Providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring.

**STORM WATER.** Storm water runoff, snow melt runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration and drainage.

**STORM WATER MANAGEMENT.** The programs to maintain quality and quantity of storm water runoff to pre-development levels.

**STORM WATER MANAGEMENT FACILITIES.** The drainage structures, conduits, ditches, combined sewers, sewers, retention basins, detention basins, rain gardens and all device appurtenances by means of which storm water is collected, transported, pumped, treated, held or disposed of.

STORM WATER RUNOFF. Flow on the surface of the ground, resulting from precipitation.

**STREAM.** All perennial and/or intermittent stream waterways and wetlands as identified on a seven and one-half minute USGS quadrangle map, or as determined by a federal or state agency or the city.

STRUCTURAL BMP. Devices that are constructed to provide control of storm water runoff.

**SURFACE WATER.** Includes waters upon the surface of the earth inbounds created naturally or artificially including, but not limited to, streams, other water courses, lakes and reservoirs.

**TDEC 303(D) LIST.** The list is a compilation of the streams and lakes in the state that are "water quality limited" or are expected to exceed water quality standards in the next two years and need additional pollution controls. Water quality limited streams are those that have one or more properties that violate water quality standards. They are considered impaired by pollution and not fully meeting designated uses. Additionally, the **303(D) LIST** prioritizes impacted streams for specialized studies called total maximum daily load (TMDL) <a href="http://www.state.tn.us/environment/wpc/publications/303d2006.pdf">http://www.state.tn.us/environment/wpc/publications/303d2006.pdf</a>.

**TOTAL MAXIMUM DAILY LOAD (TMDL).** A calculation of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. The Clean Water Act, § 303, establishes water quality standards and TMDL programs. In the State of Tennessee, TMDLs are established by TDEC. http://tennessee.gov/environment/wpc/tmdl/.

UNAPPROVED SPECIES. Invasive species of plants, such as kudzu, as designated by the city.

**WATERCOURSE.** A permanent or intermittent stream or other body of water, either natural or human-made, which gathers or carries surface water.

WATERSHED. All the land area that contributes runoff to a particular point along a waterway.

**WETLANDS.** An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland determination shall be made by the Army Corp of Engineers and/or the State Department of Environment and Conservation, and/or other qualified professionals.

(Ord. 1167, passed 4-24-2008)

## § 14-803 LAND DISTURBANCE PERMITS.

## (A) When required.

- (1) Every person disturbing less than one acre of land and not part of a larger development must address land disturbance permit as a part of their building permit. Any land disturbance less than 4,000 square feet is exempt. The individual will be required to follow the policy on disturbances less than one acre and not part of a larger common plan of development.
- (2) Every person disturbing more than one acre of land or if the site is part of a larger common plan of development will be required to obtain a land disturbance permit from the city. The individual will be required to follow the storm water regulations and the policy for disturbances greater than one acre of land or if the site is part of a larger common plan of development.
- (B) Building permit. No building permit shall be issued until the applicant has obtained a land disturbance permit where the same is required by this chapter.
  - (C) Exemptions. The following activities are exempt from the permit requirement:
- (1) Any emergency activity that is immediately necessary for the protection of life, property or natural resources;
- (2) Existing nursery and agricultural operations conducted as a permitted main or accessory use; and
- (3) Any logging or agricultural activity that is consistent with an approved farm conservation plan or a timber management plan prepared or approved by the USDA Natural Resources Conservation Service.
  - (D) Application for a land disturbance permit.
- (1) Each application less than an acre and greater than 4,000 square feet shall include all of the information on the application as mandated by the city.
  - (2) Each application of one acre or larger shall include:
    - (a) A copy of TDEC Notice of Intent (NOI) § 4(3) with a TDEC tracking number;
- (b) A Storm Water Pollution Prevention Plan (SWPPP) § 4(2), providing for storm water management during the land disturbing activity and after the activity has been completed; and

- (c) Each application for a land disturbance permit shall be accompanied by payment of land disturbance permit and other storm water management fees, which shall be established by the city.
  - (E) Review and approval of application.
- (1) The city will review each application for a land disturbance permit to determine its conformance with the provisions of the chapter. Within 30 days after receiving an application, the city shall provide one of the following responses in writing:
  - (a) Approval of the permit application;
- (b) Approval of the permit application, subject to reasonable conditions as may be necessary to secure substantially the objectives of this chapter and issue the permit subject to these conditions; or
  - (c) Denial of the permit application, indicating the reason(s) for the denial.
- (2) If the city has granted conditional approval of the permit, the applicant shall submit a revised plan that conforms to the conditions established by the city. However, the applicant shall be allowed to proceed with his or her land disturbing activity so long as it conforms to conditions established by the city.
- (F) *Permit duration*. Every land disturbance permit shall expire and become null and void within one year of issuance. Extensions may be requested.
- (G) Notice of construction. The applicant must notify the city in advance of the commencement of construction. Regular inspections of the storm water management system construction may be conducted by the city.
  - (H) Performance bonds.
- (1) The city may, at its discretion, require the submittal of a performance security, performance bond or irrevocable letter of credit prior to issuance of a permit in order to ensure that the storm water practices are installed by the permit holder as required by the approved storm water management plan. The amount of the installation performance security or performance bond shall be the total estimated construction cost of the structural BMPs approved under the permit plus any reasonably foreseeable additional related costs (e.g., for damages or enforcement) [or plus a certain percentage of the total estimated costs]. The performance security shall contain forfeiture provisions for failure to complete work specified in the storm water management plan. The applicant shall provide an itemized construction cost estimate complete with unit prices which shall be subject to acceptance, amendment or rejection by the city. Alternatively, the city shall have the right to calculate the cost of construction cost estimates.
- (2) The performance security, performance bond or irrevocable letter of credit shall be released once final stabilization has been achieved.
- (I) Easement to property. The city has the right to ingress and egress on project site to inspect, enforce and mitigate on the site.

(Ord. 1167, passed 4-24-2008)

# § 14-804 STORM WATER SYSTEM DESIGN AND MANAGEMENT STANDARDS.

- (A) Storm water design or BMP manual. The municipality adopts as its storm water design and best management practices (BMP) manual the following publications, which are incorporated by reference in this chapter as is fully set out herein:
- (1) TDEC Sediment and Erosion Control Manual: <a href="http://www.state.tn.us/environment/wpc/sed">http://www.state.tn.us/environment/wpc/sed</a> ero controlhandbook/;
- (2) Storm water BMP Selection Guide Manual for Tennessee: <a href="http://eerc.ra.utk.edu/divisions/wrrc/BMP/bmp.htm">http://eerc.ra.utk.edu/divisions/wrrc/BMP/bmp.htm</a>;
  - (3) Aquatic Construction Buffer Ordinance, Section (9);
  - (4) TDEC Post Construction Manual; and
  - (5) Water Resources Habitat Conservation Plan (HCP).
- (B) Storm Water Pollution Prevention Plan requirements (SWPPP). TDEC SWPPP, as required by the State Department of Environment and Conservation.
- (C) Notice of Intent (NOI). TDEC NOI, as required by the State Department of Environment and Conservation.

(Ord. 1167, passed 4-24-2008)

## § 14-805 POST CONSTRUCTION.

- (A) As-built plans. All applicants are required to submit as built plans for any permanent water quality structures located on-site after final construction is completed. The plan must show the final design specifications for all permanent water quality structures and must be sealed by a registered professional engineer licensed to practice in the state. A final inspection by the city is required before any performance security or performance bond will be released. The city shall have the discretion to adopt provisions for a partial pro-rata release of the performance security or performance bond on the completion of various stages of development.
  - (B) Landscaping and stabilization requirements.
- (1) Any area of land from which the natural vegetative cover has been either partially or wholly cleared by development activities shall be re-vegetated according to a schedule approved by the city. The following criteria shall apply to re-vegetation efforts.
- (a) Reseeding must be done with all annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion and permanently stabilize the affected areas.
- (b) Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion and permanently stabilize the affected areas or until the plantings are established.
- (2) In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after

construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.

- (C) Inspection of storm water management facilities. Periodic inspections of facilities may be performed as provided for in division (D) below and § 14-807(C).
- (D) Failure to meet or maintain design or maintenance standards. If a responsible party fails or refuses to meet the design or maintenance standards required for storm water facilities under this chapter, the city, after reasonable notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the storm water management facility becomes a danger to public safety or public health, the city shall notify in writing the party responsible for maintenance of the storm water management facility and they shall be given a time frame to repair the facility. In the event that corrective action is not undertaken within that time, the city may take necessary corrective action. The cost of any action by the city under this section shall be charged to the responsible party.

(Ord. 1167, passed 4-24-2008)

#### § 14-806 WAIVERS.

- (A) General. Every applicant shall provide for post construction storm water management as required by this chapter, unless a written request is filed to waive this requirement. Requests to waive the storm water management plan requirements shall be submitted to the city for approval.
- (B) Conditions for waiver. The minimum requirements for storm water management may be waived in whole or in part upon written request of the applicant, provided that at least one of the following conditions applies:
- (1) It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this chapter;
- (2) Alternative minimum requirements for on-site management of storm water discharges have been established in a storm water management plan that has been approved by the city; or
- (3) Provisions are made to manage storm water by an off-site facility. The off-site facility must be in place and designed to provide the level of storm water control that is equal to or greater than that which would be afforded by on-site practices. Further, the facility must be operated and maintained by an entity that is legally obligated to continue the operation and maintenance of the facility.
- (C) Downstream damage and the like prohibited. In order to receive a waiver, the applicant must demonstrate to the satisfaction of the city that the waiver will not lead to any of the following conditions downstream:
  - (1) Deterioration of existing culverts, bridges, dams and other structures;
  - (2) Degradation of biological functions or habitat;
  - (3) Accelerated stream bank or streambed erosion or siltation; or
  - (4) Increased threat of flood damage to public health, life or property.

(D) Land disturbance permit not to be issued where waiver requested. No land disturbance permit shall be issued where a waiver has been requested until the waiver is granted. If no waiver is granted, the plans must be submitted.

(Ord. 1167, passed 4-24-2008)

### § 14-807 EXISTING LOCATIONS AND DEVELOPMENTS.

- (A) Requirements for all existing locations and developments. The following requirements shall apply to all locations and development at which land disturbing activities have occurred previous to the enactment of this chapter:
- (1) Denuded areas must be vegetated or covered under the standards and guidelines specified in the BMP manual and on a schedule acceptable to the city;
- (2) Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed;
- (3) Drainage ways shall be properly covered in vegetation or secured with rip-rap, channel lining and the like to prevent erosion;
  - (4) Trash, junk, rubbish and the like shall be cleared from drainage ways; and
- (5) Storm water runoff shall be controlled to the extent reasonable to prevent pollution of local waters.
- (B) Requirements for existing problem locations. The city shall in writing notify the owners of existing locations and developments of specific drainage, erosion or sediment problem affecting the locations and developments, and may recommend action to correct those problems. The notice shall also specify reasonable time for compliance.
- (C) Inspection of existing facilities. The city may, to the extent authorized by state and federal law, establish inspection programs to verify that all storm water management facilities, including those built before as well as after the adoption of the ordinance comprising this chapter, are functioning within design limits. These inspection programs may be established on any reasonable basis, including, but not limited to, routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of the municipality's NPDES storm water permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, ground water and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other BMPs.
- (D) Corrections of problems subject to appeal. Corrective measures imposed by the storm water utility under this section are subject to appeal under § 14-812 of this chapter.

(Ord. 1167, passed 4-24-2008)

## § 14-808 ILLICIT DISCHARGES.

- (A) *Scope*. This section shall apply to all water generated on developed or undeveloped land entering the municipality's separate storm sewer system.
- (B) *Prohibition of illicit discharges*. No person shall introduce or cause to be introduced into the municipal separate storm sewer system any discharge that is not composed entirely of storm water. The commencement, conduct or continuance of any non-storm water discharge to the municipal separate storm sewer system is prohibited, except as described as follows:
  - (1) Uncontaminated discharges from the following sources:
    - (a) Water line flushing or other potable water sources;
    - (b) Landscape irrigation or lawn watering with potable water;
    - (c) Diverted stream flows;
    - (d) Rising ground water;
    - (e) Groundwater infiltration to storm drains;
    - (f) Pumped ground water;
    - (g) Foundation or footing drains;
    - (h) Crawl space pumps;
    - (i) Air conditioning condensation;
    - (j) Springs;
    - (k) Non-commercial washing of vehicles;
    - (l) Natural riparian habitat or wet-land flows;
    - (m) Swimming pools (if dechlorinated typically less than one PPM chlorine);
    - (n) Firefighting activities; and
    - (o) Any other uncontaminated water source.
- (2) Discharges specified in writing by the city as being necessary to protect public health and safety; and
  - (3) Dye testing is an allowable discharge if the city has so specified in writing.
  - (C) Prohibition of illicit connections.
- (1) The construction, use, maintenance or continued existence of illicit connections to the separate municipal storm sewer system is prohibited.
- (2) The prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

- (D) Reduction of storm water pollutants by the use of best management practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section.
- (E) Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into the municipal separate storm sewer system, the person shall take all necessary steps to ensure the discovery, containment and cleanup of the release. In the event of a release of hazardous materials the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the city no later than the next business day.

(Ord. 1167, passed 4-24-2008)

## § 14-809 AQUATIC CONSTRUCTION BUFFER.

- (A) Objective.
- (1) It is the objective of this chapter to protect the physical and ecological integrity of waterways from surrounding upland activities. Aquatic buffers protect the integrity in the following ways:
  - (a) Filtering excess amounts of sediment, organic material, nutrients and other chemicals;
  - (b) Providing flood protection;
  - (c) Reducing storm water runoff velocities;
  - (d) Protecting channel bank areas from scour and erosion;
- (e) Providing shade for cooling adjacent water, which allows waters to hold a great level of dissolved oxygen; and
  - (f) Providing leaf litter and large woody debris important to aquatic organisms.
- (2) Aquatic buffers are most effective when storm water runoff is flowing into and through the buffer as shallow sheet flow, rather than in a concentrated form. Therefore, it is critical that the design of any development include best management practices, to the maximum extent practical, that will result in storm water runoff flowing into and through the aquatic buffer as shallow sheet flow.
- (B) Applicability. This chapter shall apply to all new developments, modifications to existing developments and/or redevelopments within the city, except for the following:
- (1) Development, modifications to existing development and/or redevelopment which prior to the effective date of the ordinance comprising this chapter;

- (1) Is covered by a valid, unexpired site plan which has been issued a land disturbance; or
- (2) Is covered by a valid, unexpired building permit.
- (C) Width requirements for aquatic construction buffers. The aquatic buffer widths shall be calculated as follows:
- (1) Aquatic construction buffer-zone requirements for discharges into impaired or high quality 303d listed streams must follow the state general construction permit requirement for these streams. (Refer to State NPDES permit § 4.4.2) <a href="http://www.state.tn.us/environment/wpc/stormh20/">http://www.state.tn.us/environment/wpc/stormh20/</a>.
- (2) For a non-303(d) listed, the width of aquatic construction buffer zone for a stream should be an average of 25 feet from the disturbed area to the stream bank.
- (3) The aquatic construction buffer adjacent to delineated wetlands and springs shall extend an average of 25 feet perpendicular beyond the edges of the delineated wetlands and springs.
  - (D) Design standards for aquatic construction buffers.
- (1) The aquatic construction buffer area is a mature strip of undisturbed native vegetation (either original or re-established) that can provide erosion control to the stream during construction. If an aquatic construction buffer area must be removed during construction then an appropriate width aquatic buffer must be replaced. A planting plan shall be required. A planting plan shall be submitted to the city for approval and will comply with the following:
- (a) All planting plans shall be drawn at a scale of not less than one inch equals 20 feet for small tracts and one inch equals 50 feet for large tracts on 24-inch by 36-inch sheets;
- (b) A minimum of two complete sets of planting plans shall be submitted at the time of application. Also, one reduced copy of a complete planting plan on a sheet(s) no larger than 11 inches by 17 inches shall also be submitted; and
- (c) The planting plan shall include a "plant schedule" which lists the number and common and botanical name(s) of all existing and proposed plantings. The "plant schedule" shall also list the height, spread and where applicable, the caliper of all new plantings at the time of planting.
- (2) Establishment of a aquatic construction buffer must adhere to the following conditions and be shown on the planting plan:
- (a) Stream banks must be planted with native vegetation that represents both woody (trees and shrubs) and herbaceous species appropriate to the site. Density shall depend on therevegetation technique to be used and existing site conditions;
  - (b) No trees shall be planted in a utility district easement;
  - (c) No species may comprise more than one-third of the total planted trees or shrubs;
  - (d) Seedlings/trees must be guaranteed at a 75% survivorship; and
  - (e) Invasive species must be removed.
  - (E) Management and maintenance of aquatic construction buffers.

- (1) Management of the aquatic construction buffer during construction includes specific limitations on alteration of the natural conditions. The following practices and activities are restricted within the aquatic construction buffer, except with prior approval by the city:
  - (a) Clearing or grubbing of existing vegetation; and
  - (b) Use, storage or application of pesticides, herbicides and fertilizers.
- (2) The following structures, practices and activities are permitted in the aquatic construction buffer subject to the prior approval by the city and the following specific design or maintenance features:
  - (a) Crossings (road and utilities); provided, the following criteria are followed.
- 1. Aquatic resource alteration permit must be obtained from State Department of Environment and Conservation if a stream crossing is necessary.
- 2. The width of the crossing should be minimum width and as perpendicular to the stream as possible.
  - (b) Paths and greenways, provided the design and location are approved by the city;
- (c) Individual trees within the aquatic construction buffer may be removed if in danger of falling, causing damage to dwellings or other structures, causing blockage of the stream, standing in the path of a proposed water or sewer main, or the roots of the tree are penetrating or in danger of penetrating a sewer line at a joint of pipe connection. The root wad or stump should be left in place, where feasible, to maintain soil stability; and
  - (d) Removal of invasive species and replacement with approved native species.
  - (3) Aquatic construction buffers shall count toward open space reservation requirements.
- (4) Aquatic construction buffers shall be left in a stabilized condition upon completion of the development and construction. The vegetative condition of the entire aquatic construction buffer must be monitored and landscaping or stabilization performed to repair erosion, damaged vegetation or other problems identified. Only native vegetation may be used in conjunction with stabilization activities. Subsequent permits, such as grading, and building, may be with held if, after written notification, required landscaping or landscaping to be preserved is not properly maintained. All landscaping or stabilization activities within the aquatic construction buffer must have prior approval by the city. In addition, performing work in and around waters of the state may require coverage under a state and possibly a federal permit.
- (F) Water pollution hazards. The following land uses and/or activities are designated as potential water pollution hazards. Adequate containment systems to prevent runoff must be set up and these materials must be set back from any water body by the distance indicated below:
  - (1) Storage of hazardous substances: 150 feet;
  - (2) Above or below ground petroleum storage facilities: 150 feet; and
- (3) Land application of biosolids: 100 feet or a distance as required by 40 C.F.R. part 503, whichever is greater.
- (G) Conflict with other regulations. Where the standards and management requirements of this aquatic construction buffer ordinance are in conflict with other laws, regulations or ordinances

regarding streams, steep slopes, credible soils, wetlands, floodplains, timber harvesting, land disturbance activities, Water Resource Habitat Conservation Plan, city's Aquatic Construction Buffer Map or other environmental protective measures, the more restrictive requirements shall apply.

(Ord. 1167, passed 4-24-2008)

## § 14-810 ENFORCEMENT.

- (A) *Enforcement authority*. The city shall have the authority to issue notices of violation and citations, and to impose the civil penalties provided in this section.
  - (B) Notification of violation.
- (1) Written notice. Whenever the city finds that any permittee or any other person discharging storm water has violated or is violating this chapter or a permit or order issued hereunder, the city may serve upon the person written notice of the violation. Within ten days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted to the Director. Submission of this plan, in no way, relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.
- (2) Consent orders. The city is empowered to enter into consent orders, assurances of voluntary compliance or other similar documents establishing an agreement with the person responsible for the non-compliance. The orders will include specific action to be taken by the person to correct the non-compliance within a time period also specified by the order. Consent orders shall have the same force and effect as administrative orders issued pursuant to divisions (B)(4) and (5) below.
- (3) Show cause hearing. The city may order any person who violates this chapter or permit or order issued thereunder, to show cause why a proposed enforcement action should not be taken. Notice shall be served on the person specifying the time and place for the meeting, the proposed enforcement action and the reasons for the action, and a request that the violator show cause why this proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least ten days prior to the hearing.
- (4) Compliance order. When the Director finds that any person has violated or continues to violate this chapter or a permit or order issued thereunder, he or she may issue an order to the violator directing that, following a specific time period, adequate structures, devices, be installed or procedures implemented and properly operated. Orders may also contain other requirements as might be reasonably necessary and appropriate to address the non-compliance, including the construction of appropriate structures, installation of devices, self-monitoring and management practices.
- (5) Cease and desist orders. When the city finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the Director may issue an order to cease and desist all violations and direct those persons in non-compliance to:
  - (a) Comply forthwith;

- (b) Take appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and terminating the discharge; and
- (c) Conflicting standards. Whenever there is a conflict between any standard contained in this chapter and in the BMP manual adopted by the municipality under this chapter, the strictest standard shall prevail.

(Ord. 1167, passed 4-24-2008)

## § 14-811 PENALTIES.

- (A) *Violations*. Any person who shall commit any act declared unlawful under this chapter, who violates any provision of this chapter, who violates the provisions of any permit issued pursuant to this chapter, or who fails or refuses to comply with any lawful communication or notice to abate or take corrective action by the city, shall be guilty of a civil offense.
- (B) *Penalties*. Under the authority provided in T.C.A. § 68-221-1106, the municipality declares that any person violating the provisions of this chapter may be assessed a civil penalty by the city of not less than \$50 and not more than \$5,000 per day for each day of violation. Each day of violation shall constitute a separate violation.
- (C) Recovery of damages and costs. In addition to the civil penalty in division (B) above, the municipality may recover:
- (1) All damages proximately caused by the violator to the municipality, which may include any reasonable expenses incurred in investigating violations of, an enforcing compliance with, this chapter or any other actual damages caused by the violation; and
- (2) The costs of the municipality's maintenance of storm water facilities when the user of the facilities fails to maintain them as required by this chapter.
- (D) Other remedies. The municipality may bring legal action to enjoin the continuing violation of this chapter, and the existence of any other remedy, at law or equity, shall be no defense to any actions.
- (E) Remedies cumulative. The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action, civil or criminal, that one or more of the remedies set forth herein has been sought or granted.

(Ord. 1167, passed 4-24-2008)

### § 14-812 STORM WATER BOARD OF APPEALS.

- (A) There is created a Board of Environmental Appeals to hear appeals filed by any person incurring a civil penalty or damage assessment imposed pursuant to § 14-811 of these regulations.
- (B) The Board may issue subpoenas requiring attendance of witnesses and production of evidence as requested, administer oaths and take testimony as the Board deems necessary to fulfill its purpose.
  - (C) The Board shall be composed of five members appointed by the City Council.

- (D) The City Council shall select appointees so that the Board will consist of individuals with an expertise as follows:
  - (1) One licensed professional engineer with civil engineering expertise;
  - (2) One Council member;
  - (3) One representative of the development or industrial community;
  - (4) One neighborhood representative; and
  - (5) One member at large.
- (E) Board members shall serve for a term of five years. A Board member shall continue to serve, however, until a successor has been appointed, or until the Board member has been reappointed. The terms of the original Board members shall be staggered so that the term of one member shall expire each year.
- (F) An appointment to succeed a Board member who is unable to serve and member's full term shall be for the remainder of the member's term.
  - (G) Board members may be reappointed, but they do not succeed themselves automatically.
  - (H) Board members shall serve without compensation.
- (I) The Board shall annually select one of its members to serve as Chair and another member to serve as Vice-Chair of the Board by a majority vote of all members.
- (J) The Board shall keep complete and accurate records of the proceedings of all its meetings. The city shall designate a person to serve as secretary to the Board.
- (K) No Board member shall participate in the appeal of any matter in which the member has direct personal or financial interest.
- (L) Three members of the Board shall constitute a quorum, and the concurrence of a majority of the Board present and voting in any matter shall be required for a determination of any matter within its jurisdiction.

(Ord. 1167, passed 4-24-2008)

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